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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,758

04/02/2004

Jeffrey H. Peltier

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08/11/2004

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EXAMINER

PEZZUTO, HELEN LEE

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/816,758	PELTIER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Helen L. Pezzuto	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/2/04, 5/6/04</u> .  | 6) <input type="checkbox"/> Other: ____                                     |

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 4/2/04 and 5/6/04 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claims 1-17 are currently pending in this application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined disclosures of Whipple et al. (US-674) and EP 0264710.

U.S. 6,605,674 B1 to Whipple et al. discloses a process of making structurally modified, high molecular weight water-soluble polymer flocculants. Prior art process entails initiating polymerization of an aqueous solution of monomers under free radical

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polymerization conditions to form a polymer solution and subsequently adding at least one structural modifier to the polymer solution after at least 30% polymerization of the monomers has occurred. In one of prior art embodiments, the structural modifier is a crosslinking agent, wherein the crosslinking agent is added preferably after about 50% polymerization of the monomers (col. 8, lines 44-51; col. 9, lines 15-24). The structural modifier (i.e. crosslinking agent) maybe added all at once, or in portions (col. 8, lines 15-22). Suitable non-ionic, water-soluble monomers include the presently claimed (meth)acrylate, and suitable cationic monomers include acrylamidopropyltrimethyl ammonium chloride and methacrylamidopropyltrimethylethyl ammonium chloride (col. 5, lines 26-39), which are close structural analogues to those expressed in claims 6-8. Prior art preferred crosslinking agent include N,N'-methylenebisacrylamide as expressed in claim 12. The resulting water-soluble structurally modified polymer derived from prior art process has a molecular weight of 2 million to 30 million which clearly embrace the values expressed in claims 9-10 (col. 8, lines 7-14).

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Comparative examples 1-10 show the preparation of polymers modified by late addition of crosslinking agents as the sole structural modifier. Prior art further disclose and exemplify a method of flocculating an aqueous suspension of organic matter comprising adding an effective flocculating amount of the structurally-modified water-soluble polymer prepared by the patented process(i.e. about 10 to 1,000 ppm).

Prior art typically exemplify 50-90 mol% of acrylamide and 50-10 mol% of the cationic ammonium salt monomer. The examiner is of the position that it would have been obvious to one having ordinary skill in the art to arrived at the molar ratios expressed in claims 4-5, and 11 within the general conditions of the reference since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. Prior art does not expressly exemplify the quaternary ammonium salt monomer species expressed in claims 6-7, 11, 14-15. Since the claimed species are close structural homologues to those quaternary ammonium salt disclose

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and exemplified, the examiner is of the position that it would have been obvious to one skilled in the art to vary the substituents on the ammonium salt monomer within the definition expressed in claim 3, in light of their closely related structures and the resulting expectation of similar flocculating/dewatering properties. Finally, regarding the means used to separate the organic matter within the aqueous suspension. Prior art discussed using mechanical means (i.e. sedimentation) in conventional dewatering process in the background of the invention section (col.1, lines 15-62). The examiner is of the position that the presently claimed centrifugal separation is within the scope of the mechanical separation techniques such as sedimentation, disclosed in the prior art. In reference to the "continuously adding" expressed in claim 1, the examiner is of the position that the phrase is within the generic scope of prior art "added in portions". In any event, EP 0264710 discloses a closely related process of adding crosslinking agents to polyammonium salt flocculants, after polymer conversions of 25 to 90%. EP-710 specifically teaches adding the crosslinking agent all

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at once, continuously, or distributed over a certain part or all of the conversion range (page 5, 6<sup>th</sup> paragraph). Accordingly, even if the instantly recited "continuously adding" is not within the scope of US-674's "added in portions", it would have been obvious to one skilled in the art to add continuously, or at least experiment with the different modes of adding, including adding continuously with the expectation of success as taught in the prior art.

#### ***Double Patenting***

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claims 1-17 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1-17 of 10/287,236. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after

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allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims 1-17 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-17 of copending Application No. 10/287, 236. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

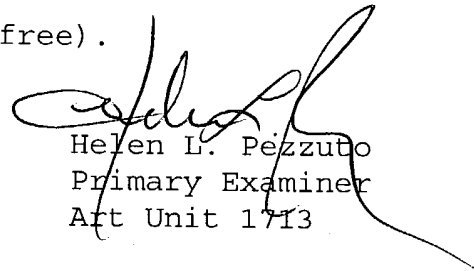
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp